

ABSTRACT

A radial transverse electric polarizer device includes a substrate material having a first refractive index and a plurality of elongated azimuthally oriented elements coupled to the substrate material, the plurality of elongated elements having a second refractive index. The plurality of elements are periodically spaced apart to form a plurality of gaps such that the radial transverse electric polarizer device interacts with an electromagnetic radiation including first and second polarizations to reflect substantially all of the radiation of the first polarization and transmit substantially all of the radiation of the second polarization. The plurality of elongated elements are coated with this thin layer of absorbing material which absorbs radiation at a wavelength of the electromagnetic radiation. The polarizer device may be used, for example, in a lithographic projection apparatus to increase imaging resolution.